



NATA LIGHTNG CO.,LTD.  
www.nata.cn  
Email:info@nata.con  
Tel:+86-750-3770000 Fax:+86-750-3771111  
Address:380JinOu Road,GaoXin Zone,Jiang Men City,Guangdong,Ching

---

## Nata

---

LumCAT: 1496-S	
Luminaire: 92.70.185.00	
Report No: 220525-B007	Voltage(V):
Test No: 220525-C007	Current(A):
LampCAT: CREE CXA1517	Power (W): 8.1620
Lamp flux(lm): 915.1	PF:
Number of Lamps: 1	Ballast type:
Length(mm): 43	Width(mm): 43
Phm Type: C	Height(mm): 0

---

## Photometric Results

---

Lumens(lm): 737.80  
Efficiency(%): 80.62%  
Lumens(lm)/Power(W): 90.39  
Central intensity(cd): 3040.676  
Maximum intensity(cd): 3040.676  
Angle of maximum intensity: C=0.0  $\gamma$ =0.0  
Beam Angle(50%Imax): [C0/180]Total=22.6  
                                  [C90/270]Total=22.6  
Field angle(10%Imax): [C0/180]Total=53.1  
                                  [C90/270]Total=53.1  
Maximum s/h(1/2): C0\_180=0.38 C90\_270=0.38  
Maximum s/h(1/4): C0\_180=0.43 C90\_270=0.43  
Up flux rate of lamp(%): 0.00%  
Down flux rate of lamp(%): 80.62%  
Up flux rate of LUM(%): - -  
Down flux rate of LUM(%): 100.00%  
CIE Type : Direct lighting  
Output flux ratio in  $\pi$  solid angle : 97.187%

$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
0.0	3040.676	0.000	0	.000%	.000%
1.0	3014.534	2.897	2.897	.317%	.393%
2.0	2957.470	8.572	11.469	.937%	1.554%
3.0	2848.944	13.887	25.356	1.517%	3.437%
4.0	2710.242	18.608	43.964	2.033%	5.959%
5.0	2556.603	22.658	66.622	2.476%	9.030%
6.0	2377.195	25.928	92.55	2.833%	12.544%
7.0	2192.334	28.363	120.913	3.099%	16.388%
8.0	2034.810	30.253	151.166	3.306%	20.489%
9.0	1860.556	31.570	182.736	3.450%	24.768%
10.0	1696.011	32.186	214.922	3.517%	29.130%
11.0	1563.435	32.569	247.49	3.559%	33.544%
12.0	1413.365	32.541	280.031	3.556%	37.955%
13.0	1275.463	31.910	311.941	3.487%	42.280%
14.0	1167.609	31.271	343.212	3.417%	46.518%
15.0	1062.571	30.617	373.829	3.346%	50.668%
16.0	952.648	29.529	403.357	3.227%	54.670%
17.0	866.260	28.325	431.682	3.095%	58.509%
18.0	779.678	27.138	458.82	2.965%	62.188%
19.0	703.598	25.806	484.626	2.820%	65.685%
20.0	635.569	24.510	509.137	2.678%	69.007%
21.0	571.297	23.174	532.311	2.532%	72.148%
22.0	511.358	21.756	554.068	2.377%	75.097%
23.0	459.761	20.377	574.444	2.227%	77.859%
24.0	414.371	19.112	593.556	2.088%	80.449%
25.0	366.338	17.752	611.308	1.940%	82.855%
26.0	324.369	16.304	627.612	1.782%	85.065%
27.0	287.636	14.973	642.585	1.636%	87.095%
28.0	235.412	13.242	655.827	1.447%	88.889%
29.0	191.254	11.163	666.99	1.220%	90.402%
30.0	155.559	9.364	676.354	1.023%	91.672%
31.0	118.386	7.623	683.977	.833%	92.705%
32.0	87.269	5.892	689.869	.644%	93.503%
33.0	61.770	4.391	694.26	.480%	94.098%
34.0	38.989	3.049	697.309	.333%	94.512%
35.0	26.799	2.043	699.352	.223%	94.789%
36.0	20.884	1.518	700.87	.166%	94.994%
37.0	17.799	1.262	702.132	.138%	95.165%

$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
38.0	14.087	1.064	703.196	.116%	95.310%
39.0	10.001	0.822	704.018	.090%	95.421%
40.0	8.634	0.650	704.668	.071%	95.509%
41.0	8.044	0.594	705.262	.065%	95.590%
42.0	7.551	0.567	705.829	.062%	95.667%
43.0	7.140	0.544	706.373	.059%	95.740%
44.0	6.872	0.529	706.902	.058%	95.812%
45.0	6.700	0.522	707.423	.057%	95.883%
46.0	6.633	0.521	707.945	.057%	95.953%
47.0	6.640	0.528	708.473	.058%	96.025%
48.0	6.737	0.541	709.014	.059%	96.098%
49.0	6.842	0.558	709.571	.061%	96.174%
50.0	6.924	0.574	710.145	.063%	96.252%
51.0	6.939	0.587	710.732	.064%	96.331%
52.0	7.058	0.601	711.332	.066%	96.412%
53.0	7.148	0.618	711.95	.068%	96.496%
54.0	7.282	0.636	712.586	.070%	96.582%
55.0	7.552	0.662	713.248	.072%	96.672%
56.0	7.925	0.699	713.948	.076%	96.767%
57.0	8.134	0.734	714.682	.080%	96.866%
58.0	8.388	0.764	715.446	.083%	96.970%
59.0	8.552	0.792	716.238	.087%	97.077%
60.0	8.575	0.809	717.047	.088%	97.187%
61.0	8.530	0.816	717.863	.089%	97.298%
62.0	8.403	0.816	718.679	.089%	97.408%
63.0	8.403	0.817	719.497	.089%	97.519%
64.0	8.455	0.827	720.324	.090%	97.631%
65.0	8.470	0.838	721.161	.092%	97.745%
66.0	8.433	0.843	722.005	.092%	97.859%
67.0	8.194	0.836	722.841	.091%	97.972%
68.0	8.059	0.823	723.664	.090%	98.084%
69.0	7.925	0.815	724.479	.089%	98.194%
70.0	7.761	0.806	725.285	.088%	98.304%
71.0	7.596	0.794	726.079	.087%	98.411%
72.0	7.394	0.779	726.858	.085%	98.517%
73.0	7.238	0.765	727.623	.084%	98.621%
74.0	7.148	0.756	728.38	.083%	98.723%
75.0	6.946	0.745	729.124	.081%	98.824%

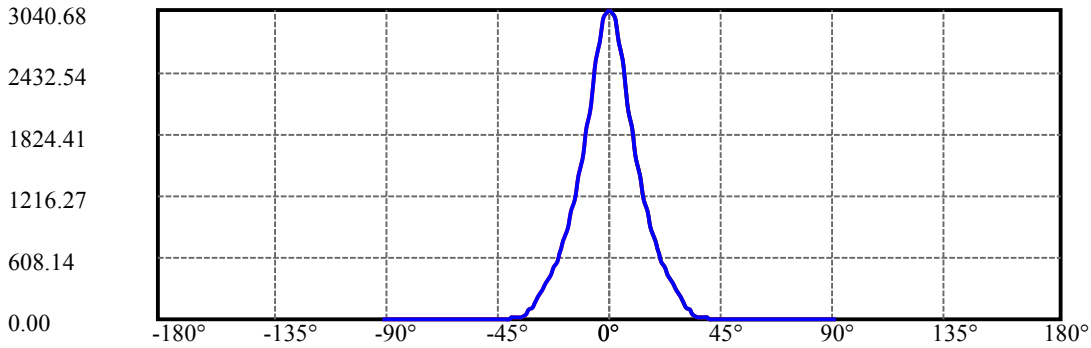
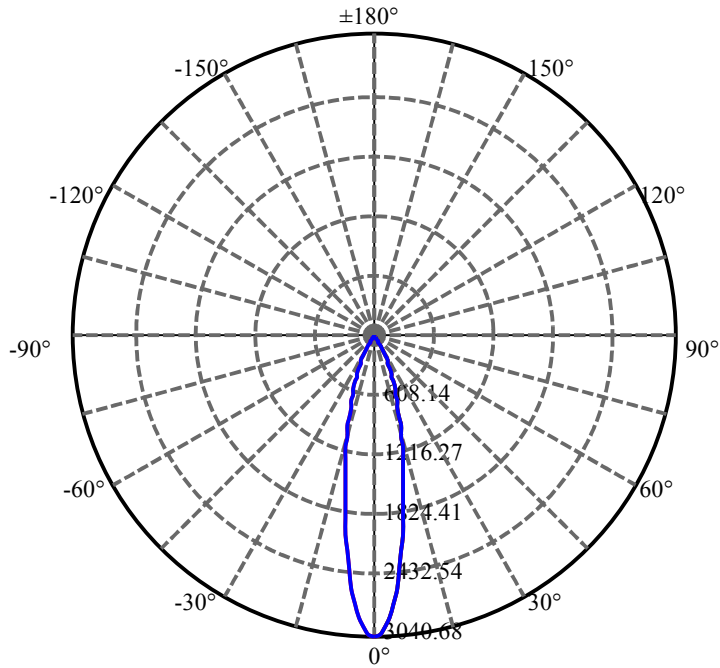
$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
76.0	6.782	0.729	729.853	.080%	98.923%
77.0	6.625	0.715	730.568	.078%	99.020%
78.0	6.491	0.702	731.27	.077%	99.115%
79.0	6.304	0.687	731.957	.075%	99.208%
80.0	6.132	0.670	732.628	.073%	99.299%
81.0	5.983	0.655	733.283	.072%	99.388%
82.0	5.818	0.640	733.923	.070%	99.474%
83.0	5.714	0.627	734.55	.069%	99.559%
84.0	5.535	0.613	735.163	.067%	99.642%
85.0	4.863	0.567	735.73	.062%	99.719%
86.0	4.586	0.516	736.247	.056%	99.789%
87.0	3.727	0.455	736.702	.050%	99.851%
88.0	3.309	0.385	737.087	.042%	99.903%
89.0	3.249	0.359	737.446	.039%	99.952%
90.0	3.219	0.355	737.801	.039%	100.000%

ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-30	676.35	73.91%	91.67%
0-40	704.67	77.00%	95.51%
0-60	717.05	78.35%	97.19%
0-90	737.45	80.58%	99.95%
0-120	737.45	80.58%	99.95%
0-180	737.80	80.62%	100.00%
60-90	21.21	2.32%	2.87%
90-120	0.00	0.00%	0.00%
90-130	0.00	0.00%	0.00%
90-150	0.00	0.00%	0.00%
90-180	0.00	0.00%	0.00%
0-23.83	590.24	64.50%	80.00%

ZONAL LUMEN SUMMARY

0-10	214.92
10-20	294.22
20-30	167.22
30-40	28.31
40-50	5.48
50-60	6.90
60-70	8.24
70-80	7.34
80-90	4.82
90-100	0.00
100-110	0.00
110-120	0.00
120-130	0.00
130-140	0.00
140-150	0.00
150-160	0.00
160-170	0.00
170-180	0.00



C0(Max): —————

C0/C180: —————

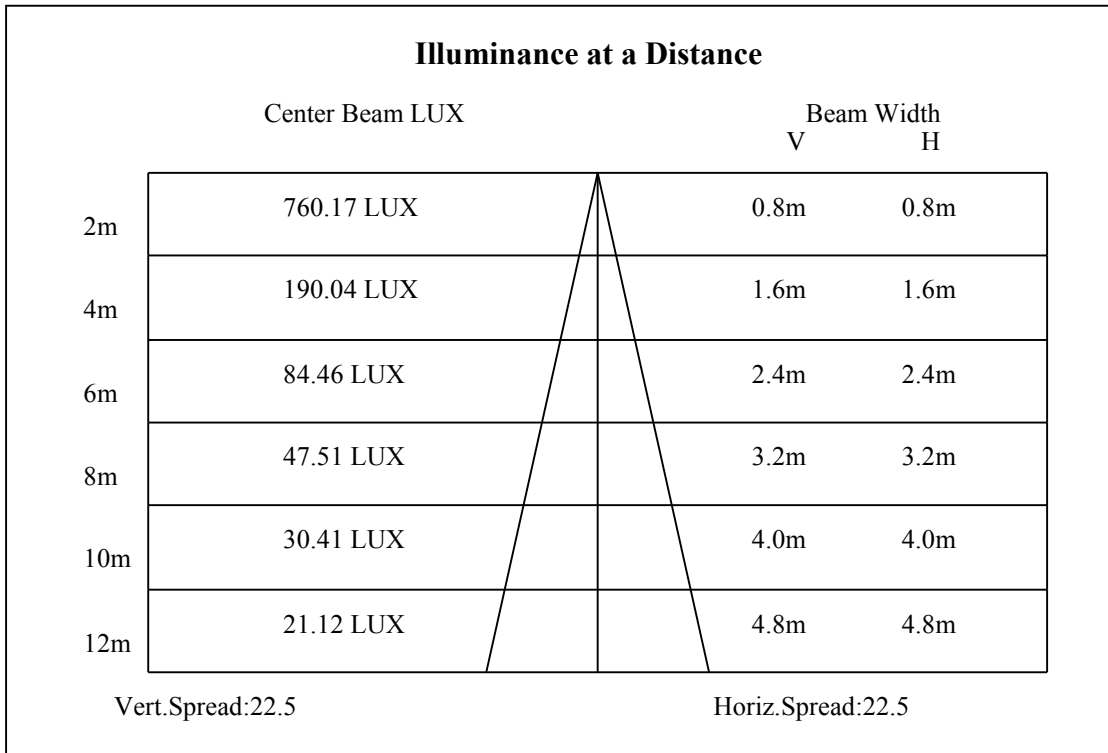
C90/C270: —————

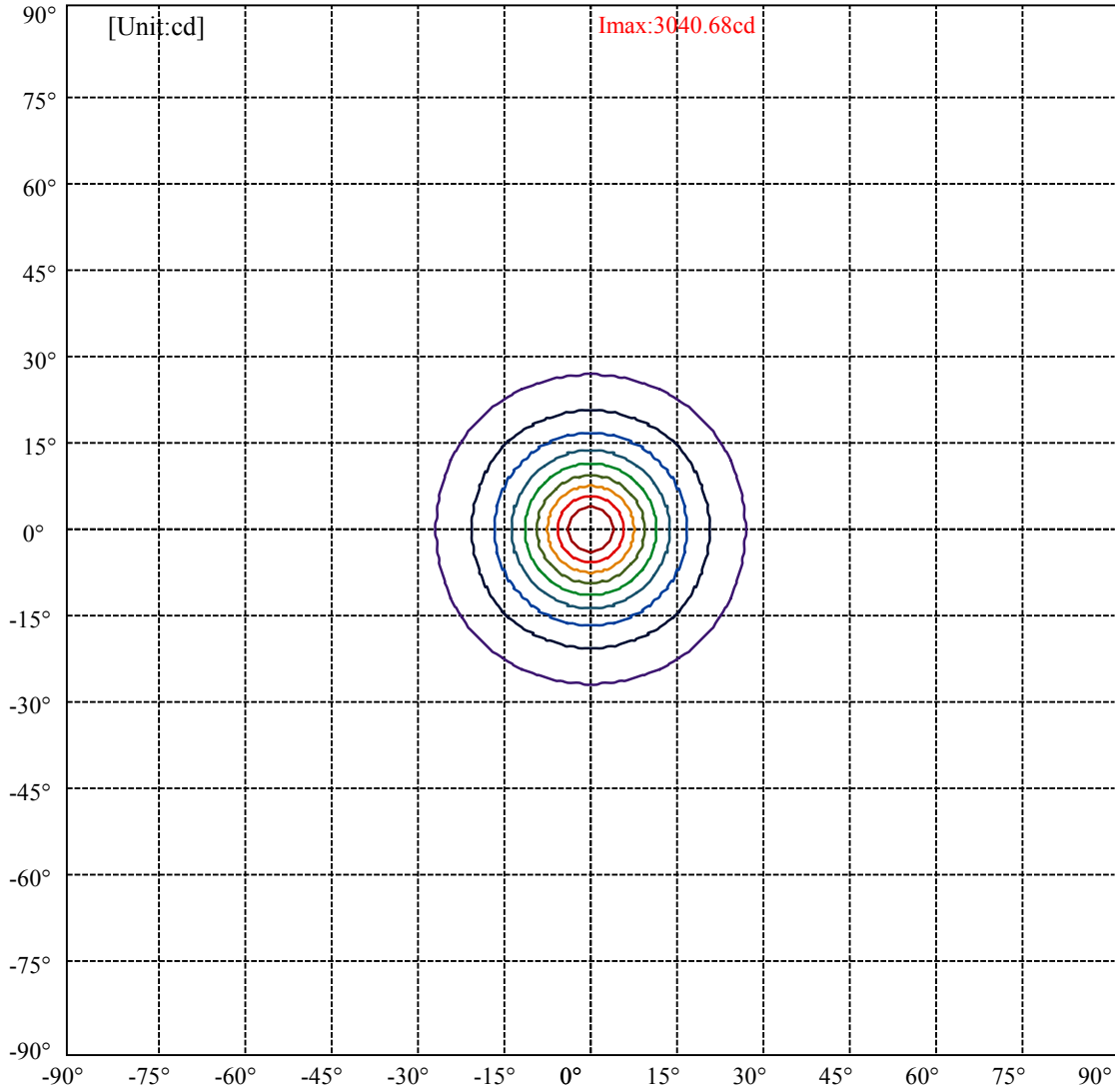
Field angle(10%Imax):C0/180Left:26.6 Right:26.6

:C90/270Left:26.6 Right:26.6

Beam Angle(50%Imax):C0/180Left:11.3 Right:11.3

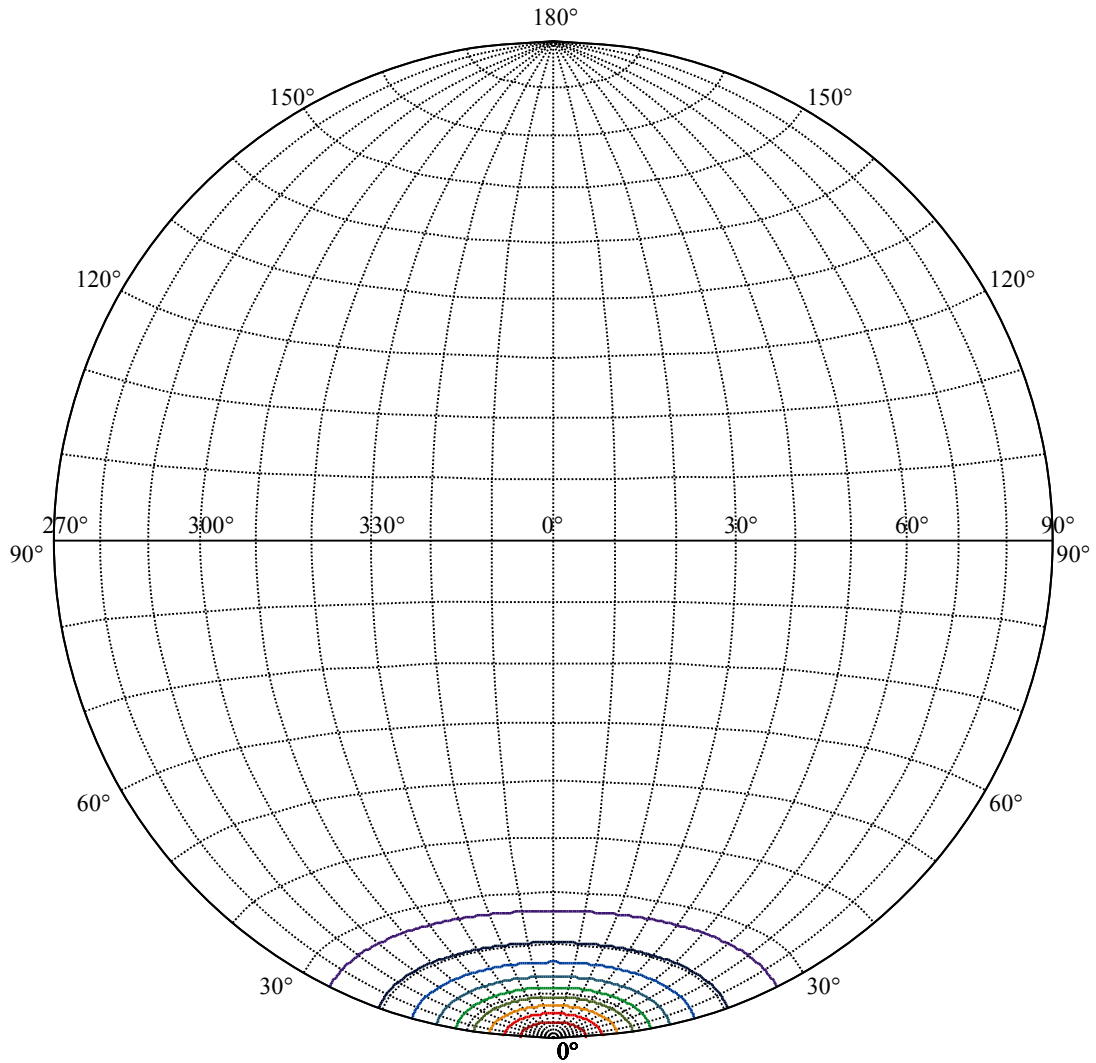
:C90/270Left:11.3 Right:11.3





(10%Imax) 304.068	—
(20%Imax) 608.135	—
(30%Imax) 912.203	—
(40%Imax) 1216.27	—
(50%Imax) 1520.34	—
(60%Imax) 1824.41	—
(70%Imax) 2128.47	—
(80%Imax) 2432.54	—
(90%Imax) 2736.61	—





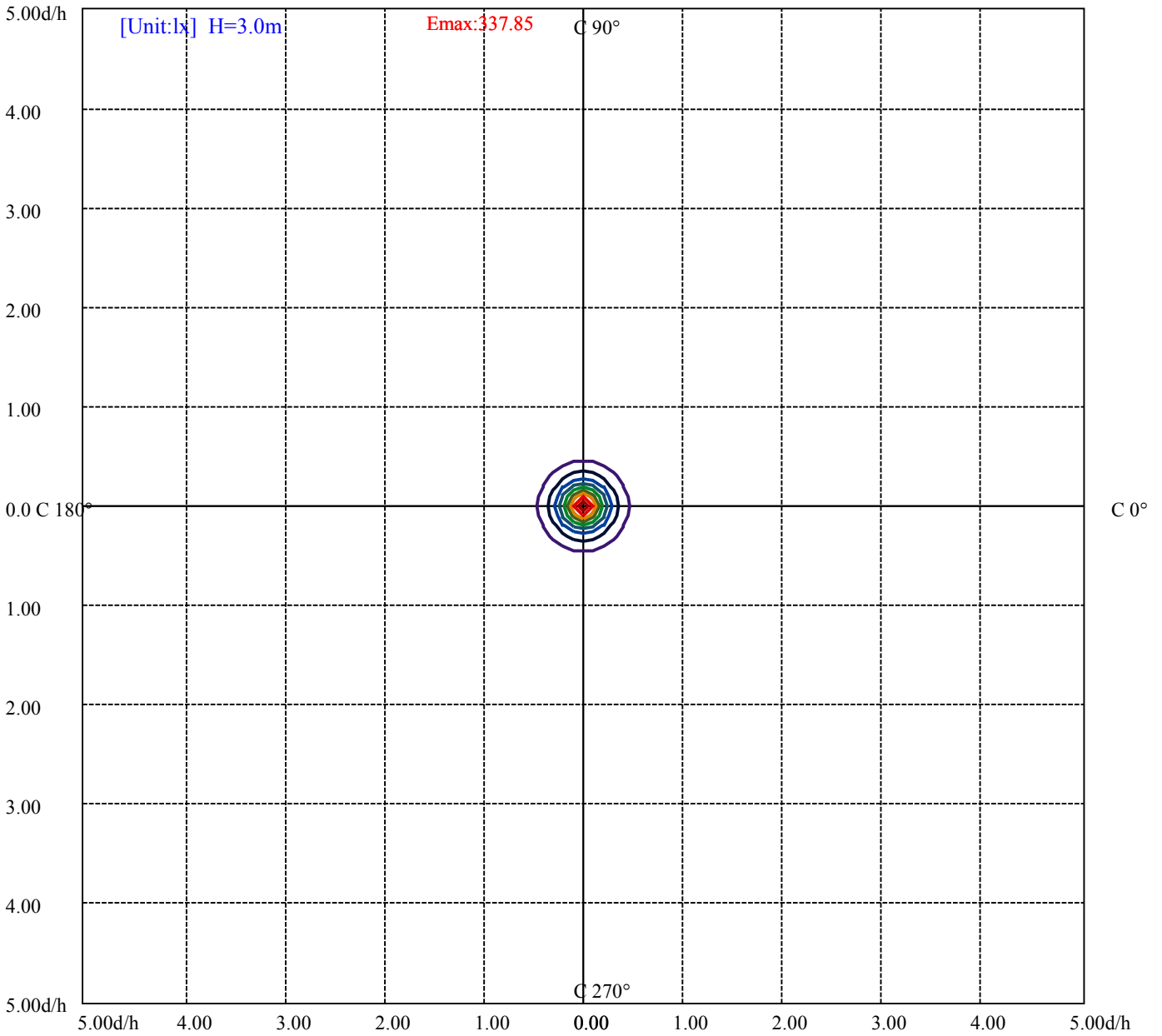
House

[Unit:cd]

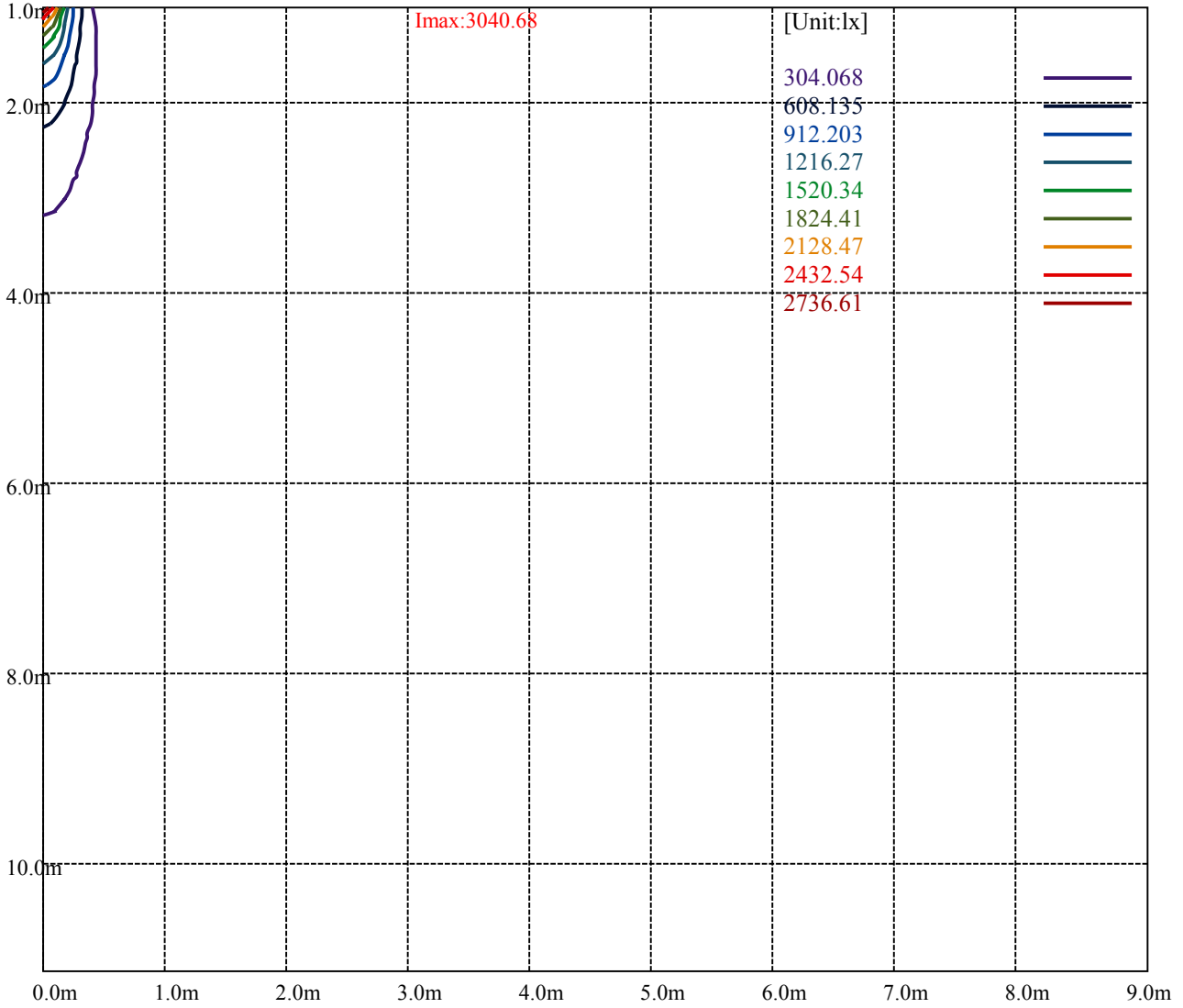
Road

**Imax:3040.68**

(10%Imax) 304.068	—
(20%Imax) 608.135	—
(30%Imax) 912.203	—
(40%Imax) 1216.27	—
(50%Imax) 1520.34	—
(60%Imax) 1824.41	—
(70%Imax) 2128.47	—
(80%Imax) 2432.54	—
(90%Imax) 2736.61	—



- (10%Emax) 33.78522
- (20%Emax) 67.57044
- (30%Emax) 101.3558
- (40%Emax) 135.1411
- (50%Emax) 168.9267
- (60%Emax) 202.7111
- (70%Emax) 236.4967
- (80%Emax) 270.2822
- (90%Emax) 304.0667



Luminance Table

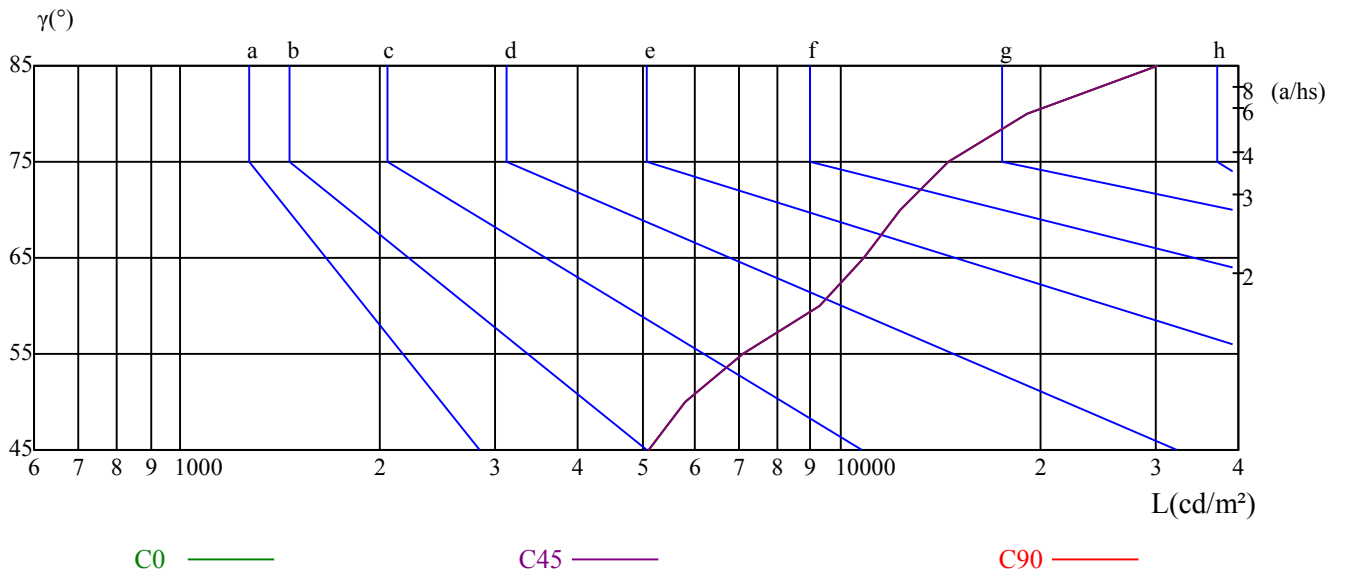
$\gamma$	45	50	55	60	65	70	75	80	85
C0	5124	5826	7120	9275	10839	12272	14515	19099	30174
C45	5124	5826	7120	9275	10839	12272	14515	19099	30174
C90	5124	5826	7120	9275	10839	12272	14515	19099	30174

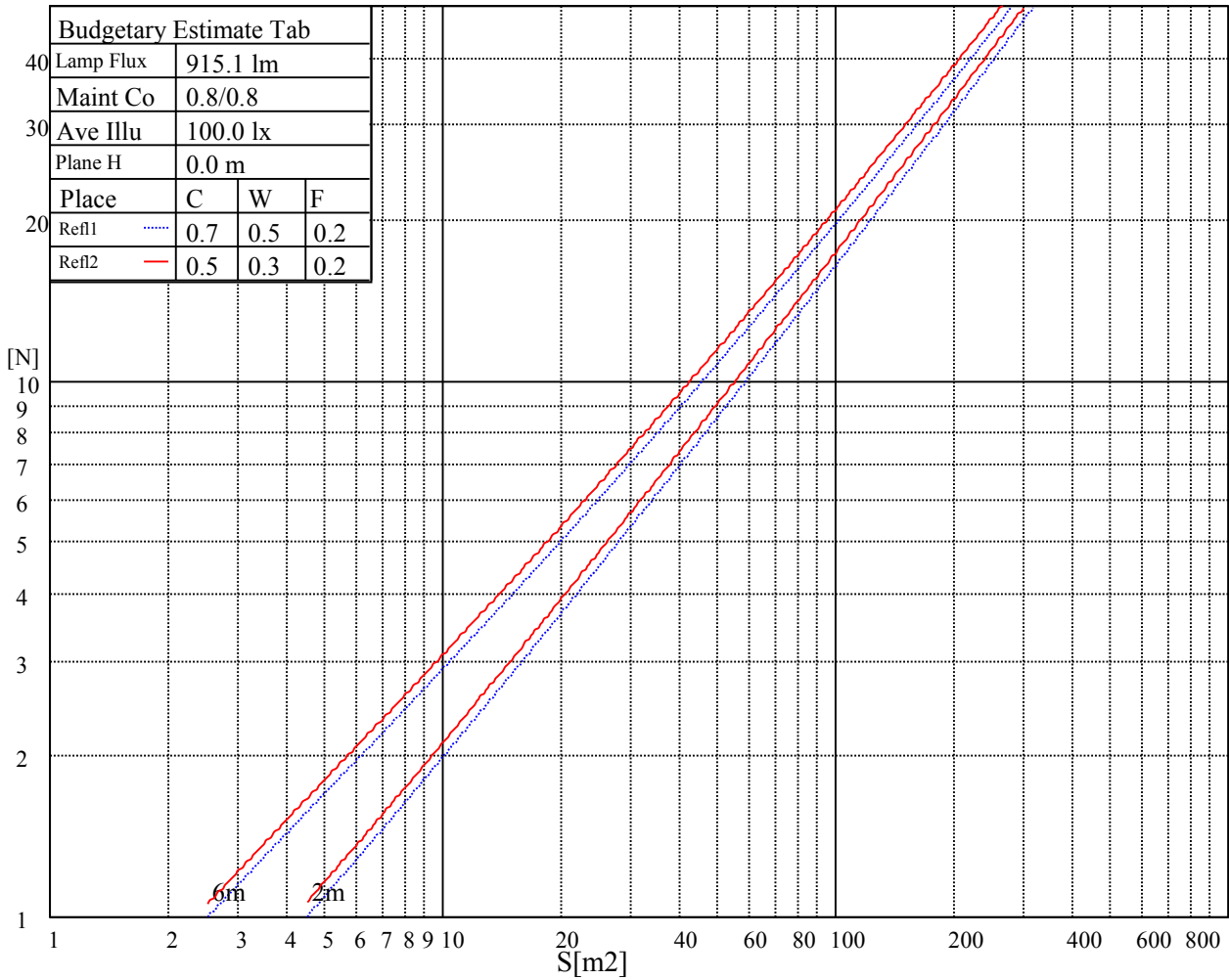
L(Hor)(65)	L(Ver)(65)	L45(65)	L(Hor)(75)	L(Ver)(75)	L45(75)	L(Hor)(85)	L(Ver)(85)	L45(85)
10839	10839	10839	14515	14515	14515	30174	30174	30174

Glare Table

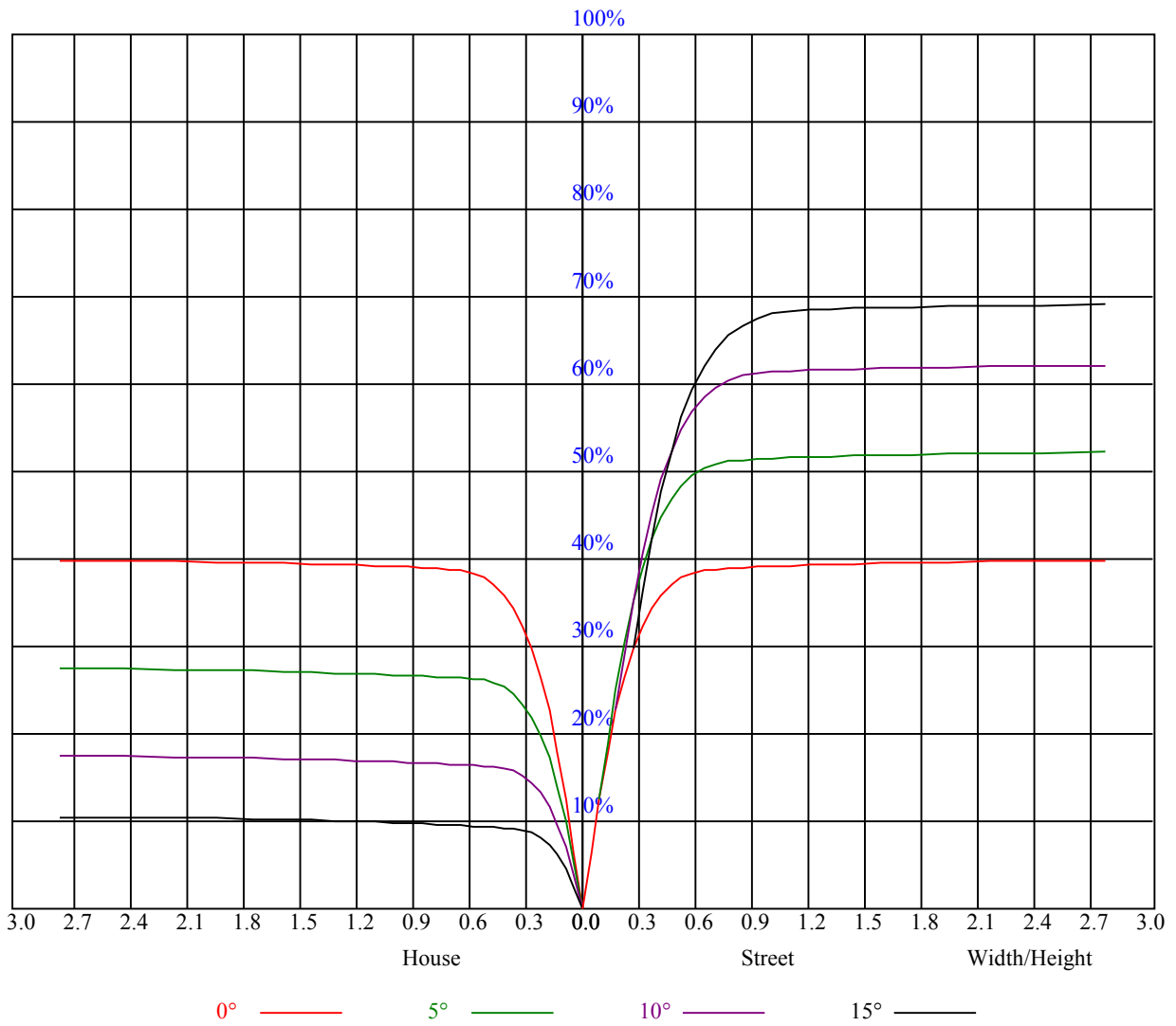
Glare	Quality	Service Values Illuminance(lx)							
1.15	A	2000	1000	500	<=300				
1.5	B		2000	1000	500	<=300			
1.85	C			2000	1000	500	<=300		
2.2	D				2000	1000	500	<=300	
2.55	E					2000	1000	500	<=300
		a	b	c	d	e	f	g	h

Luminance Limiting Curve





RHOCC	80			70			50			30			10			0
RHOW	50	30	10	50	30	10	50	30	10	50	30	10	50	30	10	0
RCR	COEFFICIENTS OF UTILIZATION RHOFC=20 CU															
0	0.96	0.96	0.96	0.94	0.94	0.94	0.90	0.90	0.90	0.86	0.86	0.86	0.82	0.82	0.82	0.81
1	0.90	0.88	0.87	0.88	0.87	0.85	0.85	0.84	0.83	0.82	0.81	0.80	0.79	0.79	0.78	0.76
2	0.85	0.82	0.80	0.84	0.81	0.79	0.81	0.79	0.77	0.79	0.77	0.76	0.77	0.75	0.74	0.73
3	0.81	0.78	0.75	0.80	0.77	0.74	0.78	0.75	0.73	0.76	0.74	0.72	0.74	0.72	0.71	0.70
4	0.77	0.74	0.71	0.76	0.73	0.70	0.75	0.72	0.70	0.73	0.71	0.69	0.72	0.70	0.68	0.67
5	0.74	0.70	0.68	0.73	0.70	0.67	0.72	0.69	0.67	0.71	0.68	0.66	0.70	0.67	0.66	0.65
6	0.71	0.67	0.65	0.71	0.67	0.64	0.69	0.66	0.64	0.68	0.66	0.64	0.67	0.65	0.63	0.62
7	0.68	0.65	0.62	0.68	0.64	0.62	0.67	0.64	0.62	0.66	0.63	0.61	0.65	0.63	0.61	0.60
8	0.66	0.62	0.60	0.66	0.62	0.60	0.65	0.62	0.59	0.64	0.61	0.59	0.63	0.61	0.59	0.58
9	0.64	0.60	0.58	0.63	0.60	0.58	0.63	0.60	0.57	0.62	0.59	0.57	0.62	0.59	0.57	0.56
10	0.62	0.58	0.56	0.61	0.58	0.56	0.61	0.58	0.56	0.60	0.57	0.55	0.60	0.57	0.55	0.54



Intensity data(cd)

C/γ(°)	0.0	1.0	2.0	3.0	4.0	5.0	6.0	7.0	8.0
0.0	3012.14	3038.44	3030.67	2963.15	2875.91	2748.63	2566.99	2402.07	2242.53
45.0	3052.78	3024.09	2955.98	2853.20	2709.79	2541.29	2368.61	2185.16	2023.23
90.0	3048.00	3008.56	2944.62	2816.75	2664.98	2507.23	2334.55	2121.83	1955.71
135.0	3049.79	3018.12	2942.83	2834.68	2709.79	2539.50	2358.45	2191.14	2029.21
180.0	3012.14	2919.53	2828.70	2685.30	2489.90	2348.89	2182.18	1961.69	1832.02
225.0	3052.78	3034.25	2985.85	2865.75	2742.06	2593.28	2388.92	2225.80	2065.06
270.0	3048.00	3048.00	2999.60	2907.58	2777.91	2613.59	2422.38	2257.47	2096.73
315.0	3049.79	3025.29	2971.51	2865.15	2711.59	2560.41	2395.49	2193.53	2033.99
360.0	3012.14	3038.44	3030.67	2963.15	2875.91	2748.63	2566.99	2402.07	2242.53
C/γ(°)	9.0	10.0	11.0	12.0	13.0	14.0	15.0	16.0	17.0
0.0	2041.16	1899.55	1755.54	1604.37	1460.36	1339.06	1211.19	1089.30	991.90
45.0	1845.77	1680.85	1545.81	1414.95	1262.58	1150.24	1049.26	936.93	849.69
90.0	1802.15	1615.72	1490.84	1358.78	1178.69	1095.03	992.44	891.69	806.25
135.0	1831.43	1682.64	1549.39	1403.00	1269.15	1157.41	1047.47	942.90	860.44
180.0	1691.01	1514.14	1403.00	1188.37	1175.88	1053.38	964.53	881.18	794.89
225.0	1873.25	1730.44	1590.03	1421.52	1271.54	1174.14	1069.28	956.94	869.46
270.0	1921.06	1751.36	1612.13	1480.08	1317.55	1197.45	1088.70	963.22	873.59
315.0	1878.63	1693.40	1560.75	1435.86	1267.96	1174.14	1077.70	959.03	883.87
360.0	2041.16	1899.55	1755.54	1604.37	1460.36	1339.06	1211.19	1089.30	991.90
C/γ(°)	18.0	19.0	20.0	21.0	22.0	23.0	24.0	25.0	26.0
0.0	891.51	812.64	730.18	655.49	596.93	531.20	471.45	426.64	381.82
45.0	769.02	692.54	623.82	566.46	503.72	450.54	405.72	359.12	315.50
90.0	716.62	644.73	577.57	518.24	459.68	414.63	377.70	326.79	289.20
135.0	772.01	708.67	638.16	572.43	515.67	464.88	421.26	379.43	340.59
180.0	717.21	654.47	588.87	529.05	476.77	426.99	386.36	335.81	285.56
225.0	777.92	698.57	635.65	568.25	508.92	458.72	415.94	369.15	328.88
270.0	795.31	708.07	637.56	574.82	513.88	461.89	412.89	371.07	328.64
315.0	797.82	709.09	652.74	585.64	515.31	469.24	423.65	362.70	324.76
360.0	891.51	812.64	730.18	655.49	596.93	531.20	471.45	426.64	381.82
C/γ(°)	27.0	28.0	29.0	30.0	31.0	32.0	33.0	34.0	35.0
0.0	325.06	301.75	235.43	190.85	151.71	120.46	86.40	56.05	36.45
45.0	304.14	222.04	182.55	145.86	108.09	77.08	53.72	31.43	22.23
90.0	246.72	206.27	165.81	134.50	101.10	72.72	49.54	31.13	22.35
135.0	305.94	242.12	200.53	163.01	121.72	89.81	64.35	38.90	25.34
180.0	243.73	203.16	157.69	124.59	92.62	59.39	37.94	25.69	18.76
225.0	289.44	239.91	203.52	168.80	132.29	100.09	73.56	48.70	32.98
270.0	302.95	233.99	195.27	161.45	122.61	94.95	69.61	43.68	30.95
315.0	283.11	234.05	189.24	155.42	116.94	83.65	59.04	36.33	25.34
360.0	325.06	301.75	235.43	190.85	151.71	120.46	86.40	56.05	36.45
C/γ(°)	36.0	37.0	38.0	39.0	40.0	41.0	42.0	43.0	44.0
0.0	24.38	20.32	17.81	12.67	8.43	7.83	7.29	6.93	6.69
45.0	19.12	16.07	11.89	7.83	7.29	6.87	6.51	6.21	5.98
90.0	18.28	15.60	12.31	9.20	8.55	8.07	7.71	7.35	7.17
135.0	19.84	17.27	13.74	9.80	8.78	8.13	7.59	7.17	6.81
180.0	16.37	14.04	9.56	8.78	8.25	7.71	7.29	6.93	6.69
225.0	24.38	21.39	17.87	11.95	10.10	9.32	8.60	7.95	7.47
270.0	23.84	20.08	15.84	11.29	9.80	9.02	8.43	8.01	7.83
315.0	20.85	17.63	13.68	8.49	7.89	7.41	6.99	6.57	6.33
360.0	24.38	20.32	17.81	12.67	8.43	7.83	7.29	6.93	6.69



Intensity data(cd)

C/γ(°)	45.0	46.0	47.0	48.0	49.0	50.0	51.0	52.0	53.0
0.0	6.51	6.57	6.69	7.11	7.41	7.59	7.77	8.01	8.19
45.0	5.74	5.56	5.44	5.32	5.32	5.32	5.38	5.50	5.68
90.0	7.05	7.05	7.05	7.11	7.17	7.17	6.87	6.93	6.93
135.0	6.51	6.39	6.33	6.39	6.45	6.57	6.63	6.63	6.69
180.0	6.63	6.69	6.81	6.87	6.93	6.99	6.99	7.05	7.05
225.0	7.11	6.75	6.51	6.27	6.16	6.04	5.98	5.98	6.04
270.0	7.89	7.95	8.13	8.43	8.55	8.66	8.49	8.66	8.60
315.0	6.16	6.10	6.16	6.39	6.75	7.05	7.41	7.71	8.01
360.0	6.51	6.57	6.69	7.11	7.41	7.59	7.77	8.01	8.19
C/γ(°)	54.0	55.0	56.0	57.0	58.0	59.0	60.0	61.0	62.0
0.0	8.55	8.78	9.20	9.50	9.68	9.80	9.86	9.98	10.04
45.0	5.80	5.92	6.04	6.16	6.27	6.57	6.87	6.93	6.93
90.0	6.69	7.05	7.29	6.81	6.99	7.17	6.93	6.93	6.57
135.0	6.75	6.87	7.17	7.41	7.83	7.83	7.77	7.59	7.47
180.0	7.11	7.23	7.35	7.35	7.35	7.35	7.35	7.35	7.29
225.0	6.21	6.33	6.39	6.45	6.57	6.63	6.87	6.99	7.05
270.0	8.72	9.20	9.86	10.28	10.40	10.88	11.00	10.94	10.40
315.0	8.43	9.02	10.10	11.11	12.01	12.19	11.95	11.53	11.47
360.0	8.55	8.78	9.20	9.50	9.68	9.80	9.86	9.98	10.04
C/γ(°)	63.0	64.0	65.0	66.0	67.0	68.0	69.0	70.0	71.0
0.0	10.16	10.16	10.04	9.68	9.14	8.96	8.90	8.90	8.72
45.0	6.87	6.81	6.69	6.57	6.45	6.45	6.39	6.33	6.16
90.0	6.57	6.45	6.33	6.33	5.98	6.04	5.92	5.80	5.68
135.0	7.53	7.71	7.83	7.77	7.47	7.17	7.05	6.87	6.69
180.0	7.23	7.05	6.81	6.63	6.51	6.51	6.39	6.33	6.16
225.0	7.11	7.17	7.23	7.17	7.11	6.99	6.87	6.69	6.51
270.0	10.04	10.04	10.04	10.58	10.70	10.82	10.40	9.68	9.44
315.0	11.71	12.25	12.79	12.73	12.19	11.53	11.47	11.47	11.41
360.0	10.16	10.16	10.04	9.68	9.14	8.96	8.90	8.90	8.72
C/γ(°)	72.0	73.0	74.0	75.0	76.0	77.0	78.0	79.0	80.0
0.0	8.37	7.89	7.77	7.65	7.17	7.11	6.93	6.69	6.51
45.0	6.04	5.98	5.86	5.86	5.80	5.68	5.68	5.56	5.50
90.0	5.56	5.56	5.56	5.50	5.50	5.50	5.38	5.32	5.26
135.0	6.51	6.33	6.27	6.16	6.10	6.04	5.98	5.92	5.86
180.0	6.10	5.98	5.92	5.86	5.86	5.80	5.74	5.68	5.56
225.0	6.51	6.45	6.33	6.16	6.04	5.92	5.86	5.74	5.62
270.0	9.26	9.26	9.08	8.66	8.31	8.13	7.65	7.47	7.05
315.0	10.82	10.46	10.40	9.74	9.50	8.84	8.72	8.07	7.71
360.0	8.37	7.89	7.77	7.65	7.17	7.11	6.93	6.69	6.51
C/γ(°)	81.0	82.0	83.0	84.0	85.0	86.0	87.0	88.0	89.0
0.0	6.33	6.21	6.10	6.04	5.92	5.86	5.74	3.47	3.29
45.0	5.44	5.38	5.26	5.20	4.90	3.47	3.35	3.35	3.29
90.0	5.20	5.08	5.02	4.78	3.47	3.35	3.29	3.29	3.23
135.0	5.80	5.68	5.62	5.50	3.53	3.35	3.29	3.23	3.17
180.0	5.56	5.50	5.38	4.66	3.41	3.35	3.29	3.23	3.17
225.0	5.56	5.50	5.44	5.38	5.26	5.14	3.47	3.35	3.35
270.0	6.69	6.27	6.10	5.98	5.86	5.74	3.71	3.29	3.29
315.0	7.29	6.93	6.81	6.75	6.57	6.45	3.71	3.29	3.23
360.0	6.33	6.21	6.10	6.04	5.92	5.86	5.74	3.47	3.29

Intensity data(cd)

<b>C/γ(°)</b>	<b>90.0</b>
<b>0.0</b>	<b>3.29</b>
<b>45.0</b>	<b>3.23</b>
<b>90.0</b>	<b>3.23</b>
<b>135.0</b>	<b>3.17</b>
<b>180.0</b>	<b>3.17</b>
<b>225.0</b>	<b>3.29</b>
<b>270.0</b>	<b>3.23</b>
<b>315.0</b>	<b>3.17</b>
<b>360.0</b>	<b>3.29</b>